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NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131				
EXAMINER				
BAE, JIH				
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## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed on 21 February 2008 have been fully considered but they are not persuasive.

Regarding the rejection of claim 14 under 35 U.S.C. 101, the final office action cited MPEP 2106.01 as supporting the examiner's position that computer-readable media may be considered statutory so long as the media is described as a machine or article of manufacture. Therefore, transmission media, propagated signals, carrier waves, etc. may not be considered statutory because signals and waves cannot properly be categorized as a machine or article of manufacture. In response, the applicant argued as follows [applicant's remarks, pp. 5, last paragraph].

The Section 101 rejection of claim 14 must be reversed because the Final Office Action's assertion that "wireless transmission media and other types of propagated signals" are nonstatutory subject matter is contrary to Section 101 and the very portions of the M.P.E.P. that are relied upon in making the rejection. Specifically, M.P.E.P. 2106 indicates that functional descriptive material that is "recorded on some computer-readable medium" can be statutory. This is consistent with the Examiner's indication at page 3 of the Final Office Action, indicating that claim 14's "recitation of a storage device" would be statutory. **M.P.E.P. 2106 goes on to describe computer-readable medium as a medium "in a computer or on an electromagnetic carrier signal."** In this context, the claimed signal bearing medium as a "transmission medium" (e.g., an electromagnetic carrier signal) is statutory subject matter. **In short, it appears that the Final Office Action misinterprets M.P.E.P. 2106 as requiring that such a statutory medium be a physical medium, where this section clearly states that a computer-readable medium may be an electromagnetic carrier signal.** This is consistent with the USPTO's database, which includes over 250 issued patents having claims directed to a "signal-bearing medium" as discussed in the previous response of record. In this regard, claim 14 is directed to statutory subject matter and the Section 101 rejection must be reversed.

As highlighted in the cited portion of applicant's arguments, applicant has asserted that the MPEP describes a computer-readable medium as a medium in a computer or on an electromagnetic carrier signal. The examiner respectfully disagrees with this interpretation. The relevant section of the MPEP is quoted below:

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Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *In re Warmerdam*, 33 F.3d \*1354, 31 USPQ2d \*1754, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

**When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal**, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diamond v. Diehr*, 450 U.S. \*175, 185-86, 209 USPQ \*1, 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer."). Such a result would exalt form over substance. *In re Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under § 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in *Abele*, 684 F.2d at 907, 214 USPQ at 687). See also *In re Johnson*, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting"). Thus, nonstatutory music is not a computer component, and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law.

**When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal**, it is not statutory and should be rejected under 35 U.S.C. 101. In addition, USPTO personnel should inquire whether there should be a rejection under 35 U.S.C. 102 or 103. USPTO personnel should determine whether the claimed nonfunctional descriptive material be given patentable weight. USPTO personnel must consider all claim limitations when determining patentability of an invention over the prior art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983). USPTO personnel may not disregard claim limitations comprised of printed matter. See *Gulack*, 703 F.2d at 1384, 217 USPQ at 403; see also *Diehr*, 450 U.S. at 191, 209 USPQ at 10. However, USPTO personnel need not give patentable weight to printed matter absent a new and unobvious functional relationship between the printed matter and the substrate. See *Lowry*, 32 F.3d \*\*at 1583-84, 32 USPQ2d \*\*at 1035 \*\*; *In re Ngai*, 367 F.3d 1336, 70 USPQ2d 1862 (Fed. Cir. 2004).

The examiner notes that the portions of the MPEP that the applicant has cited are directed towards *nonfunctional* descriptive material. However, applicant's invention is directed

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towards functional descriptive material. As such, the cited portions of the MPEP are not directly applicable to applicant's invention. Nevertheless, the examiner interpretation of this section is that the MPEP does *not* define a computer readable medium as being "in a computer or on an electromagnetic carrier signal". Rather, the MPEP is distinguishing between the three possible scenarios of data being recorded

1. on a computer-readable medium
2. in the computer itself, or
3. on an electromagnetic carrier signal.

Thus, the MPEP actually differentiates between an electromagnetic carrier signal and a computer-readable medium. This is supported by subsequent sections of the MPEP, which defines that a statutory claim for functional descriptive material requires that the functional descriptive material be claimed as part of a statutory article of manufacture or machine. From MPEP 2106.01, "FUNCTIONAL DESCRIPTIVE MATERIAL: 'DATA STRUCTURES' REPRESENTING DESCRIPTIVE MATERIAL *PER SE* OR COMPUTER PROGRAMS REPRESENTING COMPUTER LISTINGS *PER SE*".

Computer programs are often recited as part of a claim. USPTO personnel should determine whether the computer program is being claimed as part of an **otherwise statutory manufacture or machine**. In such a case, the claim remains statutory irrespective of the fact that a computer program is included in the claim. The same result occurs when a computer program is used in a computerized process where the computer executes the instructions set forth in the computer program. Only when the claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material *per se* and hence nonstatutory.

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and USPTO personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material. When a computer program is claimed in a process where the computer is executing the computer program's instructions, USPTO personnel should treat the claim as a process claim. \*\* When a computer program is recited in conjunction with a

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**physical structure, such as a computer memory**, USPTO personnel should treat the claim as a product claim. \*\*

The MPEP requires that functional descriptive material be claimed as part of a statutory machine or article of manufacture (i.e. having physical structure). Functional descriptive material must be "structurally and functionally interrelated to the medium" since such structure will allow the function to be realized. An electromagnetic signal or transmission media cannot be considered an article of manufacture or a machine, nor does it have any physical structure which allows the function of the functional descriptive material to be realized.

Regarding the prior art rejections in view of Garg and Boice, applicant presented the argument that Fig. 7(a)/(b) and Fig. 8 of Boice, which teach a means for gating a clock and gating an address/data input to a memory array, respectively, are directed towards different embodiments. In response, the examiner points out that Boice does not teach that Fig. 7(a)/(b) and Fig. 8 are directed towards separate embodiments that are not practicable in the same invention. Boice's disclosure indicates that the aspects shown in Fig. 8 represent an additional source power savings [col. 10, lines 35-42]. The examiner submits that, absent a clear teaching from Boice that Fig. 7(a)/(b) and Fig. 8 are directed towards two separate embodiments not intended to be practiced together, one of ordinary skill in the art would have taken the plain meaning of Boice's disclosure to mean that the figures are directed towards different aspects of the same invention.

Additionally, applicant presented additional arguments that, in summary, assert that Boice does disclose the same invention as the applicant. In response, to the extent that Boice teaches the gating of clock inputs in Fig. 7(a)/(b), and the gating of address and data inputs in Fig. 8, Boice anticipates the corresponding parts of applicant's claims.

Applicant further argued a lack of motivation to combine the Boice and Garg references. Applicant's argument appears to rest on the assumption that a specific teaching, suggestion, or motivation (TSM) from the prior art is necessary in determining obviousness. MPEP 2141 [R-6], "RATIONALES TO SUPPORT REJECTIONS UNDER 35 U.S.C. 103", lists a number of other legitimate rationales to support an obviousness rejection besides TSM. Therefore, applicant's argument is not valid in light of the MPEP's disclosure of other acceptable rationales besides TSM.

With respect to the combination of Boice and Garg, the examiner submits that Boice and Garg teach similar devices in that the register banks of Garg and the memory array of Boice both represent state-holding circuits that receive clock, address, and data inputs. Boice teaches that gating the clock, address, and data inputs of the memory array result in a reduction in power consumption. Boice teaches that what is of concern is the switching of the input signals to the memory array. Therefore, the fact that Garg teaches a register bank while Boice teaches a memory array does not preclude Boice's teachings regarding the gating of input signals from being applicable to the register bank of Garg. It would have been obvious to one of ordinary skill in the art that Boice's teachings could have been applied to Garg, with the predictable result that gating the input signals to Garg would have produced a decrease in power consumption.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JI H. BAE whose telephone number is (571)272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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